CHAPTER 1
INTRODUCTION

1.1 INTRODUCTION

The Framework Convention on Climate Change commits Parties to the Convention to develop national programs and measures to respond to climate change. One of the key responses that countries can make is to adopt measures that can reduce atmospheric accumulation of greenhouse gases (GHG) and thereby delay the predicted impact of GHG on global climate. Such measures may either reduce GHG emissions (abatement) or increase terrestrial storage of carbon (sequestration). Because these measures can moderate GHG, they are termed "mitigation" options.[1]

A mitigation assessment involves a national-level analysis of the potential costs and impacts of various technologies and practices that have the capacity to mitigate climate change. Two key goals of an assessment are (1): to provide policy makers with an evaluation of those technologies and practices that can both mitigate climate change and also contribute to national development objectives, and (2) to identify policies and programs that could enhance their adoption. An initial mitigation assessment should be followed by more detailed evaluation of specific policies, programs, or projects designed to encourage implementation of selected technologies and practices.

The purpose of this book is to provide guidance in designing and conducting national mitigation assessments. Its main objectives are to assist in:

- deciding on the scope of the mitigation assessment and the methods to be applied;
- identifying, screening, and characterizing technologies and practices that have potential to mitigate climate change and also meet national development objectives;
- analyzing the potential costs and impacts of various technical or policy measures on net GHG emissions, socio-economic conditions, and national environmental quality; and
- identifying policies and programs that have potential to encourage adoption of attractive mitigation technologies and practices.

The book focuses on two broad topical areas: the energy sector (demand and supply) and non-energy sectors (forestry, agriculture, rangelands, and waste management). For each sector, it provides guidance on the evaluation of individual mitigation options and on the use of models for sectoral and integrated analysis of options. It describes data requirements, potential data sources, and approaches for developing data.

This book is designed especially for developing countries and countries with economics in transition. However, the technique can be applied in any country. It is intended for use along with training workshops.

This book is intended to complement the material on methods for mitigation assessment developed by the IPCC. It presents the challenges faced by developing countries and economies in transition in using mitigation methods, links the choice of specific methods to the decision-making process, identifies key questions in structuring the assessment process, and discusses the types of methods available, emphasizing the issues associated with their use and their application to specific sectors.

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[1] The type of mitigation option referred to in this context is different from a measure that might be taken to mitigate or moderate the impacts of climate change (for example, on agriculture or coastal settlements). The latter type of measure is generally termed an adaptation option.

The material in this book complements the IPCC work by providing more detailed and practical guidance on the use of tools and methods which can be applied for analysis of mitigation options. Whereas the IPCC efforts lay out a broad range of information applicable to all levels of decision-making for assessing mitigation options, including the setting of national goals and the design of programs and projects, this book is designed to serve as a basic reference for the analysts who are actually conducting a national mitigation assessment.

1.2 FORMAT OF THIS BOOK

Chapter 2 presents an overview of the mitigation assessment process and explains the basic concepts and methods used in the evaluation of options. It provides guidance on setting basic parameters for use in a mitigation assessment.

Chapters 3-9 and Chapters 10-14 focus on analysis of mitigation options in the energy and non-energy sectors, respectively. Each chapter contains guidance on conducting analysis of various kinds of mitigation options, and on the development of future scenarios.

Chapter 15 provides guidance on reporting results from the energy and non-energy analyses.